

ABSTRACT

A miniaturized micromachined (MEMS) accelerometer-based sensor suitable for use in biological applications, such as a middle ear implant, is provided. An
5 encapsulation layer is deposited on top of an accelerometer proof mass and flexure prior to release of the proof mass and flexure. The encapsulation layer protects the proof mass and flexure from subsequent processing steps, such as dicing and packaging, which enables fabrication of finished
10 devices having reduced size. Surfaces within the accelerometer may be passivated after releasing the proof mass and flexure. Remote piezoresistive sensing is performed in order to provide low noise and reduced sensor head size.